Name: _____ Class: _____ Date: _____ ID: A

Foundations of Geometry Mid-term Review

Short Answer

Sketch the next figure you expect in the pattern.

1.

2.

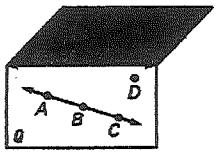
Write the next number you expect in the pattern.

3. 21,31,41,51,61.....

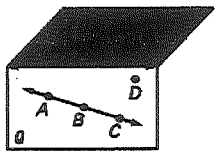
4. $-\frac{1}{3}, -1, -3, -9$.....

Use the diagram given below.

5. Name four coplanar points.



6. Name three collinear points.



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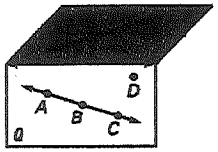
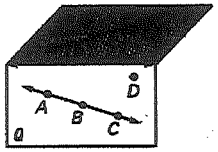
7. Name two coplanar lines.

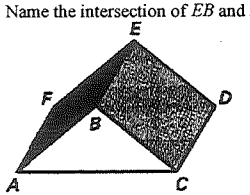


8. Name the plane that contains E, F, and G.

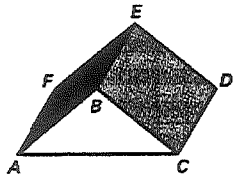


Use the diagram given below.

9. Name the intersection of $\overline{EB}$ and $\overline{BC}$.

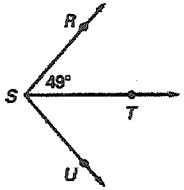


10. Name the intersection of plane ABC and $\overline{FA}$



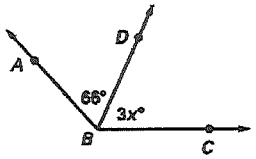
Name: _____ ID: A

21. Find $m\angle TSU$ and $m\angle RSU$.

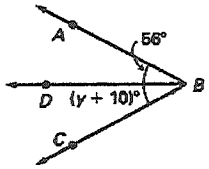


$\overrightarrow{BD}$ **bisects** $\angle ABC$. **Find the value of the variable.**

22.



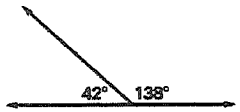
23.



Determine whether the angles are complementary, supplementary, or neither. Then tell whether they are adjacent or nonadjacent.

24.

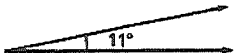
25.



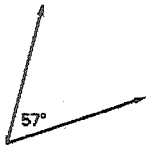
Name: _____ ID: A

Find the measure of a complement and supplement of the angle.

26.

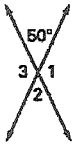


27.

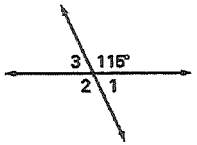


In exercises 13 and 14, find $m\angle 1$, $m\angle 2$, *and* $m\angle 3$.

28.



29.



In exercises 15 and 16, underline the hypothesis and circle the conclusion of the if-then statement.

30. If it rains, then you will need an umbrella.

31. If an angle is a straight angle, then its measure is 180°.

In exercises 17 and 18, what can you conclude from the given true statements?

32. If two angles form a linear pair, then they are supplementary. Two angles form a linear pair.
Conclusion:_____

33. If the basketball player makes the shot, then we win the game. The basketball player makes the shot.
Conclusion:_____

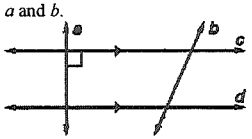
Write the statement that follows from the pair of true statements.

34. If the perimeter of the square is 24 inches, then length of a side is 6 inches.

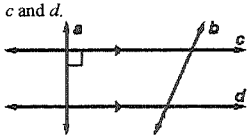
    If the length of a side of a square is 6 inches, then the area of the square is 36 square inches.

Determine whether the lines are *parallel, perpendicular, or neither.*

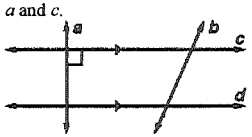
35. *a* and *b*.



36. *c* and *d*.

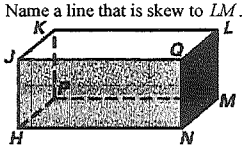


37. *a* and *c*.

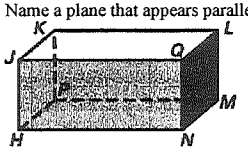


Think of each segment in the diagram as part of a line.

38. Name a line that is skew to $\overleftrightarrow{LM}$.

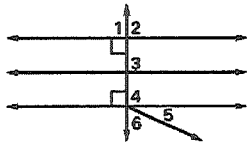


39. Name a plane that appears parallel to plane *LMN*.

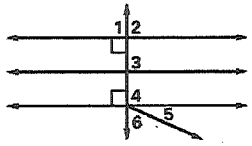


Determine whether enough information is given in the diagram to conclude that the statement is true.

40. $\angle 1 \cong \angle 2$.

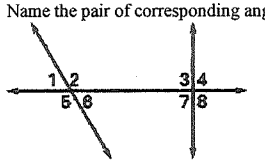


41. $\angle 2 \cong \angle 3$.

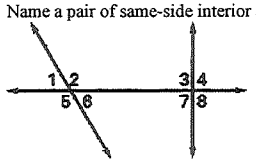


Use the diagram shown. There is more than one correct answer.

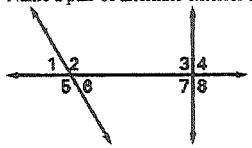
42. Name the pair of corresponding angles.



43. Name a pair of same-side interior angles.



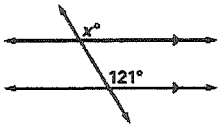
44. Name a pair of alternate exterior angles.



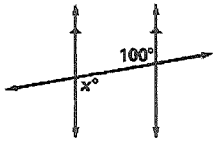
Name: _____ ID: A

Find the value of x.

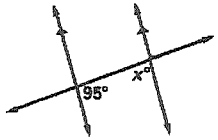
45.



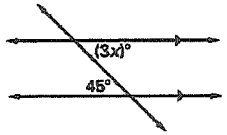
46.



47.



48.



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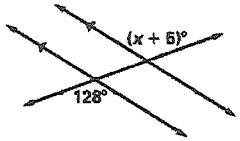
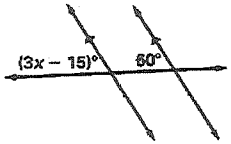


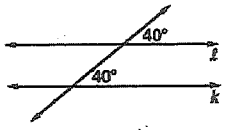
Name: _____ ID: A

50.

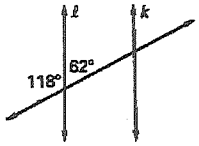


Determine whether there is enough information to conclude that $l \parallel k$.

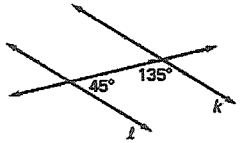
51.



52.

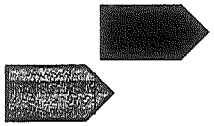


53.



Decide whether the darker figure is a translation of the lighter figure.

54.



55.